

Best Management Practices

MISSOURI DEPARTMENT OF CONSERVATION



Harlequin darter

Etheostoma histrio

Common name • Harlequin darter
Scientific name • *Etheostoma histrio*
State status • Endangered

Ecology

In Missouri, the Harlequin darter is found in streams and ditches in the lowlands of the southeastern part of the state. This species appears to have a seasonal migratory pattern, moving from larger rivers into tributaries in the warmer months of the year. It prefers areas of current with sandy bottoms where organic debris is present. Aquatic insects, including blackflies, caddisflies and mayflies, are the primary food source for this species. Adults are usually 1.5-3.0 inches in length. Sexual maturity is reached at one year of age and life expectancy can be up to four years. Spawning occurs in February and March.

Reasons for Decline

The Harlequin darter is one of the rarest Missouri darters. Based on historic records, it was never considered common or widespread. However, few recent observations have been recorded in its former range. As with other aquatic species, draining of wetlands for agricultural purposes and non-point source pollution may be contributing to the change in the abundance and distribution of the Harlequin darter.

Specific Recommendations

As a migratory species, the Harlequin darter requires more than one type of habitat. For this reason, recommendations for habitat protection apply to large rivers and all of their tributaries.

- No work should be allowed below the high bank of the stream or high water mark of wetlands between February 1 and March 30.
- Limit clearing of vegetation, including both standing and downed timber, to that which is absolutely necessary for construction purposes.
- Riparian areas located down slope of construction zones should be physically screened with sediment controls, such as silt fences or filter strips. Sediment controls should be monitored after rain and maintained for the duration of the project.

→ Sheet piling for coffer dams for the construction of bridge piers may be placed after February 1 but should be moved prior to March 30. Removal of coffer dams should be coordinated with appropriate Missouri Department of Conservation personnel.

→ Increase habitat variability in ditches by leaving large woody debris and allow a greater amount of time to lapse between clearing drainage ditches (at least two-three years).

→ Avoid stream crossings. If unavoidable, temporary crossings should be employed that do not restrict or interrupt natural stream flow. If temporary in-channel fill is necessary, culverts of sufficient size should be employed to avoid water impoundment and allow for fish passage.

General Recommendations

Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers.

Information Contacts

For further information regarding regulations for development in rivers, streams and wetlands, contact:

Missouri Department of Conservation
Policy Coordination Section
P.O. Box 180
2901 W. Truman Blvd
Jefferson City, MO 65102-0180
Telephone: 573/751-4115

Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, MO 65102-0176
Telephone: 573/526-3315

U.S. Army Corps of Engineers
Regulatory Branch
700 Federal Building
Kansas City, MO 64106-2896
Telephone: 816/983-3990

U.S. Environmental Protection Agency
Water, Wetlands, and Pesticides Division
901 North 5th Street
Kansas City, KS 66101
Telephone: 913/551-7307

U.S. Fish and Wildlife Service
Ecological Services Field Office
608 E. Cherry Street, Room 200
Columbia, MO 65201
Telephone: 573/876-1911

Disclaimer

These Best Management Practices were prepared by the Missouri Department of Conservation with assistance from other state agencies, contractors and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat. Compliance with Best Management Practices is not required by the Missouri wildlife and forestry law nor by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.